

## The Independent Learning-Independent Campus Policy: Students' Awareness of Mathematics Education

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### ABSTRACT

The purpose of this study is to assess students' awareness of mathematics education in light of independent learning-independent campuses (ILIC). The phases of the survey research technique were used to conduct this research, and a questionnaire was used as the instrument for gathering data. All of the students studying mathematics at the private university served as the participants of the study. Winsteps and Rasch's model were used to examine the questionnaire data. The results from the Rasch model's processing are then analyzed based on the researcher's objectives. Findings: According to this study, 60.73 percent of students had a high level of awareness of the ILIC. 7.69 percent of students exhibited a low level of awareness of the ILIC, while 31.58 percent of students were still unaware of its existence. In conclusion, students' awareness of ILIC, which is run by the Republic of Indonesia's Ministry of education, culture, science, and technology, has to be improved.

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## 1. INTRODUCTION

The Ministry of Education, Culture, Research, and Technology of the Republic of Indonesia launched the policy program known as Independent Learning-Independent Campus (ILIC). Nadiem claims that the ILIC's policy is to debureaucratize and grant freedom and autonomy to educational institutions. Students have the opportunity to select the fields they enjoy while lecturers are released from tiresome bureaucracy (Arifin & Muslim, 2020). Permendikbud No. 3 in 2020, which specifies that students may learn inside and outside their study program, contains a regulation governing this. In other words, students are permitted to enrol in lectures that are not required for their courses for three semesters, giving

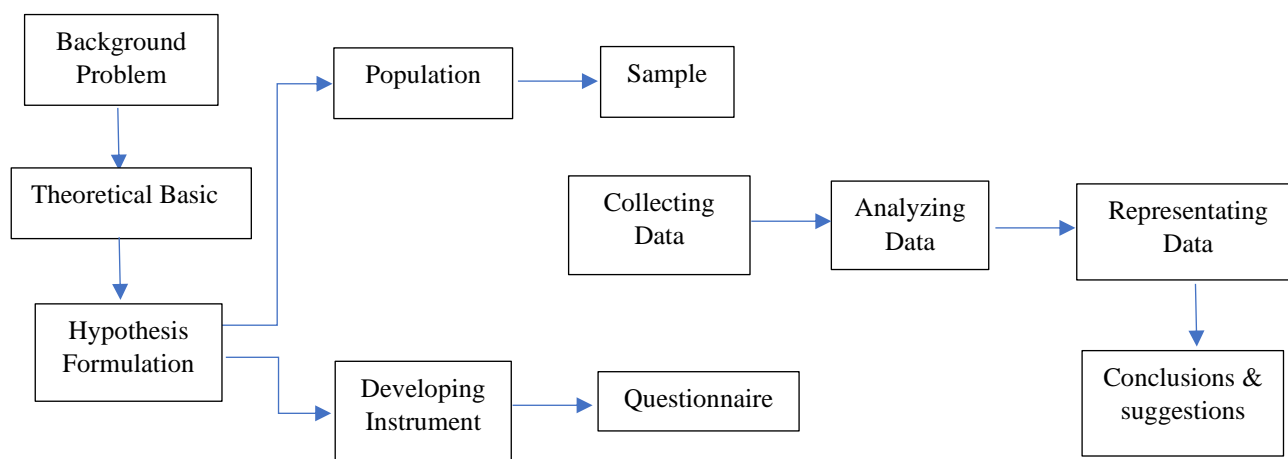
them a chance to complete two semesters of study outside of tertiary institutions in addition to one semester of elective classes. (Rochana, Darajatun, & Ramdhany, 2021). Law 212 of 2021 regarding higher education, Law 20 of 2003 concerning the National Education System, and Government Regulation No. 4 of 2014 regarding the Implementation of Higher Education and Management of Higher Education all serve as the program's legislative foundations (Tohir, 2020). According to ILIC's higher education policy, higher education has the freedom to be autonomous (Sopiansyah, Masruroh, Zaqiah, & Erihadiana, 2022). Private universities, however, face a number of obstacles in implementing the ILIC program, such as: 1) the process of adjusting the Indonesian Qualification Framework (KKNI) to the ILIC program; 2) partner campuses that are still limited; 3) very limited collaboration between universities and outside parties, such as industries and companies, even the government; 4) fund management by foundations that have not budgeted for ILIC; and 5) quality and standards of education (Fuadi & Aswita, 2021). It is preferable for students in the mathematics education study program to be aware of the program's significance in ILIC prior to encountering the difficulties mentioned above. This legal foundation should give the study program a solid understanding of the ILIC-oriented curriculum.

Following the education study program for elementary schools, the mathematics education study program is one of the educational study programs with a sufficient number of students. The study curriculum for mathematics instruction will take this into account in order to allow students to participate in ILIC activities. However, before students participate directly in the ILIC activities organized by the ministry, the study program assesses the degree of student knowledge and awareness of the ILIC program run by the ministry. It is hoped that by being aware of the program and curriculum that the ministry has introduced, the goals of the ILIC policy will be accomplished, specifically to enhance graduates' competence in both soft and hard skills, to be more prepared and pertinent to the needs of the times, and to prepare graduates as future leaders of the nation with superior and personality (Tohir, 2020). However, the results of the study by (Al Anshori & Syam, 2021) stated that based on the data gathered from the distribution of the questionnaire to the respondents, it may be possible to explain why some respondents were still unaware of the ILIC despite having heard the term. The majority of respondents had never taken part in socialization events, which is why many respondents were unaware of the ILIC program. So, one of the suggestions made to improve comprehension and knowledge of the ILIC program was to conduct more intensive socialization to instruct lecturers broadly. (Khaeruddin, Arwadi, & Majid, 2021).

The issue might be stated as follows based on the background information and literature review presented above: how is student understanding of the ILIC related to their study of mathematics education? The degree to which ILIC-related policies, initiatives, and curriculum are introduced to students by the ministry or study program is the awareness under discussion. The aim of this study, based on the issue formulation, is to assess students in the mathematics education program's level of awareness of ILIC policy.

## 2. METHODS

The research approach used in this study was a quantitative approach with a one-time survey design survey methodology. According to (Snelson, 2016), the purpose of the survey research method was to provide a quantitative analysis of an attitude trend or population's opinion. (Sugiyono, 2016) emphasized that the survey method was used to collect data from specific groups that are naturally occurring, whereas researchers gather data by distributing questionnaires where researchers did not provide such treatment. In order to perform this study, looked at how well-informed students of the University of Muhammadiyah Prof. DR. HAMKA, were aware of government regulations pertaining to the Independent Learning-Independent Campus (ILIC). According to the following stages, survey research can be conducted.



**Figure 1.** Survey Research Procedure

This study used a simple random sampling technique, a probability sampling technique. According to Sudaryono, (2018), samples were people drawn at random from a population without taking into account the strata that are present. 314 students were enrolled in the mathematics education program at the University of Muhammadiyah under the direction of Prof. DR. HAMKA, and 247 of those students served as samples. Based on the students' suitability to complete the questionnaire, this sample was selected. A questionnaire was employed as the research tool. The purpose of the questionnaire was to gauge the degree of student knowledge of ILIC policies. The instrument validation test was carried out through a validation test process by expert lecturers. The questionnaire used had low item reliability and person reliability ( $< 0.5$ ). The value of the validity of each item based on the results of the analysis stated that all items used as questionnaires were also valid because the MNSQ, ZSTD, and PT Measure Corr values already met the criteria required in the Rasch modeling. The statement item was said to be valid if one of the MNSQ, ZSTD, and CORR outfit values meets the criteria required in the Rash modelling. Outfit mean square value ( $0.5 < \text{MNSQ} < 1.5$ ), ( $-0.2 < \text{ZSTD} < 2.0$ ), ( $0.4 < \text{Pt Measure Corr} < 0.85$ ) (Sumintono, B. & Widhiarso, 2014)

### 3. FINDINGS AND DISCUSSION

The research involved gathering information from 314 students enrolled in a study program for mathematics teaching by having them respond to 16 statements using a Likert scale with a different scale for each statement and a maximum score of 1-8. On the basis of the Statistical Summary table, the first data processing was done to learn more about the instrument and the interaction of tendencies between people in general. Information on the person measure value, the Cronbach alpha value, the INFIT and OUTFIT values, and the separation value may be found in Figure 2's summary statistics. The person measure yields a value of -1.27 logit, which is the average response value among the statement instrument's respondents. The tendency of respondents to agree in the distribution of statement items is shown by the average value of more than logit 0.0. On the Cronbach alpha value (measuring reliability, namely the interaction between respondents and the item as a whole) obtained a value of 0.42 which means bad for INFIT and OUTFIT MNSQ on the table person the average value is known to be 1.02 and 0.84 (ideal value is 1.00, the closer to 1.00 the better); for OUTFIT ZSTD, the average value in the person table is -0.12 and -0.47 where the ideal value is close to 0.0 (the closer the value to 0.0 is, the better the quality of personal interaction in answering). Similarly, for the items table, the researchers looked at the value of separation for the grouping of respondents and items. It is known that the separation value for the person is 0.85. More precise grouping is called strata separation based on the calculation formula  $[(4 \times 0.85)/3] = 1.13$ . It means that there is only 1 group of respondents in this study.

TABLE 3.1 DATA MAHASISWA MTK ZOU911WS.TXT Jan 4 202  
 INPUT: 314 Person 16 Item REPORTED: 314 Person 16 Item 8 CATS WINSTEP

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SUMMARY OF 314 MEASURED Person

	TOTAL SCORE	COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	ZSTD	OUTFI MNSQ
MEAN	49.0	16.0	-1.27	.28	1.02	-.12	.84
SEM	.3	.0	.02	.00	.03	.08	.02
P.SD	5.1	.0	.43	.02	.62	1.47	.40
S.SD	5.1	.0	.43	.02	.62	1.47	.40
MAX.	60.0	16.0	-.48	.37	3.42	4.21	2.79
MIN.	32.0	16.0	-3.04	.25	.08	-4.17	.08

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REAL RMSE .33 TRUE SD .28 SEPARATION .85 Person RELIABILITY  
 MODEL RMSE .29 TRUE SD .32 SEPARATION 1.11 Person RELIABILITY  
 S.E. OF Person MEAN = .02

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Person RAW SCORE-TO-MEASURE CORRELATION = .99  
 CRONBACH ALPHA (KR-20) Person RAW SCORE "TEST" RELIABILITY = .47 SEM = 3

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SUMMARY OF 16 MEASURED Item

	TOTAL SCORE	COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	ZSTD	OUTFI MNSQ
MEAN	961.4	314.0	.00	.07	.79	-4.24	.84
SEM	72.1	.0	.34	.00	.19	1.81	.21
P.SD	279.2	.0	1.30	.01	.74	7.00	.82
S.SD	288.4	.0	1.35	.01	.76	7.22	.85
MAX.	1637.0	314.0	1.99	.08	2.56	9.90	3.03
MIN.	584.0	314.0	-2.39	.04	.24	-9.90	.25

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REAL RMSE .08 TRUE SD 1.30 SEPARATION 16.93 Item RELIABILITY  
 MODEL RMSE .07 TRUE SD 1.30 SEPARATION 18.33 Item RELIABILITY  
 S.E. OF Item MEAN = .34

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Item RAW SCORE-TO-MEASURE CORRELATION = -.98  
 Global statistics: please see Table 44.  
 UMEAN=.0000 USCALE=1.0000

Figure 2. Summary Statistic

A deeper analysis of the information gained from person statistics and statistical items about the degree of sensitivity of mathematics education study program students to the ILIC program. The results of utilizing Winstep to process the person statistic data are shown below. When determining which respondents are misfits, the average results are added to the standard deviation in the MNSQ infit column on the respondent's statistical items, and the results are compared. If the result is higher than this, the respondent is labelled misfit. (Sumintono, B. & Widhiarso, 2014). The result is 1.02 plus 0.62 produces 1.64, then the MNSQ INFIT result greater than 1.64 is said to be misfit. The appropriate respondents were obtained based on the questionnaire statement. There were 247 students from 314 students. Table 1 shows the level of student awareness in the ILIC policy.

**Table 1.** Person Measure

Entry	Total Score	Total Count	Code respondent
113	60	16	1131
115	32	16	1151

According to Table 1, respondents demonstrated that they had a high degree of awareness of the ILIC policy on the subject of the first 113 batches of students, scoring a total of 60, while the 115 subjects of the first batch had a low level of awareness, scoring a total of 32. 32 was the average score. Based on

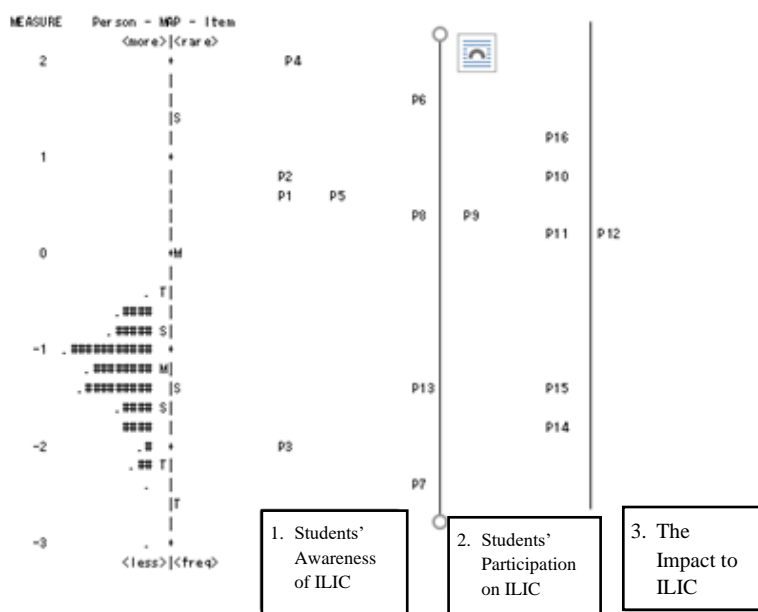
the findings of the Winsteps analysis of the Rasch model, the average score for the person statistic is 49.0. Table 2 displays the proportion of students who are aware of the ILIC program to some extent.

**Table 2.** Tabulation of Student Awareness Level Percentage on MBKM Policy

Criteria	Above average scores (> 49)	Average (=49)	Under average (< 49)
Number of students	150	19	78
Percentage	60.73%	7.69%	31.58%

According to Table 2, up to 60.73 percent of students knew and were aware of the ILIC program policy (a score above the average), 7.69 percent of students only knew a little about the ILIC policy program, and up to 31.58 percent of students were unaware of the ILIC policy administered by the Ministry of Education, Culture, Research and Technology.

Additionally, based on the diagram variable Wright maps, the degree of interaction and connectedness between the individual and the item could be examined. Students enrolled in the mathematics education study program could respond to the range of statement items in this diagram. Figure 3 displays information on the variety of instruments utilized by pupils. There were 5 statements on the instrument, hence each item was coded with P1 to P5. The most challenging instrument statement item for respondents to concur with was P4, according to the findings of the Winstep analysis on the Wright Maps variable. P3 is a point on which the respondent was able to quickly concur.



**Figure 3.** Wright Maps

According to Figure 3, a statement in Construct 1 about the degree of student understanding of ILIC had the hardest response, P4 "Does your study plan follow a previous one that adheres to the ILIC activity's format? with options for yes or no. where 86% of students indicated that they agreed. Since no respondents went over the P2 limit, P2 was also listed under the "difficult to agree" category. What number of semesters and credits could be equated with the type of ILIC activities outside of higher education, according to P2's statement? "With the right selection, you could earn 2 credits; your alternatives were 1, 2, 3, and 4. 34 percent of students chose three credits, which is the most common number. Only 10% of students answered correctly, which was 2 credits. statement P1 was also included in the category of difficult items with the statement "how much do you know about the ILIC policy?"

with options are 1. Don't know at all, 2. Know a little, 3. Know most of the contents of the policy and 4. Know the policy as a whole. Students preferred to know most of the contents of the policy by 49%.

Due to the fact that many respondents did not agree with P5, Statement P5 is also listed within the tough categories to answer (See picture 5). P5 asked, "Do the curriculum documents, operational instructions, and procedures for taking part in ILIC activities already exist in your study program?" and provided answers. Not yet, not sure, and thirdly, already. The majority of students (71%) selected "yes." Followed by the P3 statement, the P3 statement is one of the items that is easily approved by students of the mathematics education study program. P3's statement was "where did you get the information about the ILIC policy?" with the options being 1. Others, 2. Mass media, 3. Community communication channels (e.g. alumni community, lecturer community), 4. Offline/online socialization activities organized by PT, 5. PT channels (Website page, Social media), 6. Offline/online socialization activities organized by the Ministry of Education and Culture, 5. Channels from the Ministry of Education and Culture (Website, Social Media). 60% of students chose the answer Offline/online socialization activities organized by university. According to the (Laga, Nona, Langga, & Jamu, 2022) research results, The Directorate General of Higher Education, Research, and Technology's ILIC program was also popular with students, garnering a 67.54 percent interest rate and a 65.57 percent recommendation.

The current study aimed to examine the students' awareness on the ILIC in the study program of Mathematics education. The result of this study is closely related to a study by Apoko, Handayani, Hanif, & Hendriana (2023) which positively showed that the level of knowledge of students who participated in the emancipated learning program was very high (92%) and with great enthusiasm (Apoko, Hendriana, Umam, & Handayani, 2022). This indicated that universities were prepared with ILIC-oriented curricula, where curriculum development was carried out in accordance with field needs (Sopiansyah et al., 2022) so that there was a change in the concept of higher education for the better so. In this case, students from each university were expected to be ready to face challenges in the 4.0 revolution era with the concept of an independent campus. Students could be encouraged to become more prepared for work, collaboration, and creativity so that they can help their communities and themselves (Siregar, Sahirah, & Harahap, 2020).

Moreover, with an independent campus, it strives to improve graduates' competency in both soft and hard skills to better equip students to be relevant to the demands of the times and to prepare graduates as superior and charismatic future leaders of the nation (Simatupang & Yuhertiana, 2021). According to the data gathered through the distribution of questionnaires to respondents, it could be explained that although most respondents had heard of ILIC, some still remain unaware of this program. It is in line with a study showing that the majority of respondents had never engaged in socialization activities, and they agreed that there was an independent learning program that every student could use, which is why many of them were unaware of the independent learning program for the independent campus (Al Anshori & Syam, 2021). According to (Panjaitan et al., 2022), ILIC was crucial to increase students' ability in both public and private, even though students fear about the cost in ILIC Programs. However, one finding pointed out that the process of adapting the KKNi curriculum to the ILIC program, partner campuses that were limited, collaboration between private universities and outside parties, including businesses, state owned State-Owned Enterprises and Regional-Owned Enterprises, were also still very limited, fund management by foundations that have not budgeted funds for ILIC, quality and product standards, and financial stability are among the challenges faced by private universities in implementing ILIC (Fuadi & Aswita, 2021).

#### 4. CONCLUSION

The study's findings indicated that 60.73 percent of students had a high degree of awareness of the Independent Learning-Independent Campus (ILIC) program, 7.69 percent had a low level of awareness of the ILIC program, and 31.58 percent were still unaware of the ILIC policy's existence. The details of the students' correct responses to the questionnaire are as follows: 10% of students correctly know that

credits can be equated outside of the mathematics education study program; up to 60% of students are aware of ILIC policies through offline and online socialization activities sponsored by universities (PT); and 86% of students responded that the mathematics education study program had implemented the same. The significance of the study's findings is that the mathematics education research program now recognizes that 31.58 percent of students still did not know the rules governing the ILIC program, which prevents many students from participating in the ILIC program run by the ministry of education and culture. The mathematics education study program will keep working to ensure that students may contribute to or participate in the ILIC program run by the ministry of education and culture using the findings of this research. The weaknesses in the study's findings were restricted to the study program's focus on mathematics education; therefore, researchers were unable to determine how students at the University of

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